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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,461	12/14/2001	Hichem M'Saad	A6123/T43700	9343

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APPLIED MATERIALS, INC.  
2881 SCOTT BLVD. M/S 2061  
SANTA CLARA, CA 95050

EXAMINER
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HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/020,461

Applicant(s)

M'SAAD ET AL.

Examiner

John Hoffmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,6-18 and 21-42 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-18 and 21-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 July 2005 has been entered.

### ***Election/Restrictions***

Applicant's discussion of the election by original presentation is acknowledged. The traversal is on the ground(s) that there would be no additional burden and that the new species was part of the originally pending claims. This is not found persuasive because there is no evidence or rationale to support these assertions. Also it does not matter whether they were "part" of the original claims; Examiner assumes that Applicant is pointing out that at least one original claims was of a genus that encompassed both species. Most importantly, there is no requirement that there be a burden on the Office to require election of species. Nevertheless, there is a burden.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 6-18, and 21-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "high contrast" is indefinite as to its meaning. Page 3, line 10 of the specification indicates that it means an index difference of at least 2%, But page 8, line 26 indicates that it "typically" has a difference of at least 2% - which indicates that it need not have an index of at least 2%. A non-typical difference would be less than 2%. Because of the conflicting definitions, one of ordinary skill would not know what was meant by the claims.

Furthermore, there is little indication as to what the 2% difference must pertain to. Does it refer only to the undercladding, or can it include the not-yet deposited overcladding – or does it imply that both cladding layers must have identical refractive indices?

***Claim Rejections - 35 USC § 103***

Claims 1-2, 15-16, and 22-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bazylenko 6154582 alone or in view of Dragone 51366711 and Kyoto 5221309.

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See how Bazylenko was previously applied.

As to the Official Notice previously taken, such is now considered to be admitted prior art, no adequate traversal having been made by Applicant, See MPEP 2144.03 and Argument section below.

As to the new "high contrast" limitations: As indicated above, the scope of the term is not clear. This rejection is not based on the narrower of the two. It is deemed that the broadest reasonable interpretation is substantially any contrast that is high enough to channel light for a specific optical communication purpose is "high contrast". Bazylenko meets this interpretation.

The PTO gives a disputed claim term its broadest reasonable interpretation during patent prosecution. Hyatt, 211 F.3d at 1372. The "broadest reasonable interpretation" rule recognizes that "before a patent is granted the claims are readily amended as part of the examination process." Burlington Indus. v. Quigg, 822 F.2d 1581, 1583 (Fed. Cir. 1987). Thus, a patent applicant has the opportunity and responsibility to remove any ambiguity in claim term meaning by amending the application. In re Prater, 415 F.2d 1393, 1404-05 (CCPA 1969). Additionally, the broadest reasonable interpretation rule "serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified." In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004) (quoting In re Yamamoto, 740 F.2d 1569, 1571-72 (Fed. Cir. 1984)).

Still further, using Kyoto: col. 1, lines 23-25 and 50-54: a large index difference allows for easy propagation of light – substantially as disclosed in the present application. And that a difference of up to 4% is "usual" in certain applications. It would

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have been obvious to use as large a contrast as desired – depending upon the intended use of the final device.

Claims 1, 2-4, 6-14, 22-26, and 29-42 rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson 6614977 alone or in view of Dragone 51366711 and Kyoto 5221309.

See how Johnson and Dragone were previously applied. As to the Official Notice previously taken, such is now considered to be admitted prior art, no adequate traversal having been made by Applicant, See MPEP 2144.03 and Argument section below.

As to the new “high contrast” limitations: As indicated above, the scope of the term is not clear. This rejection is not based on the narrower of the two. It is deemed that the broadest reasonable interpretation is substantially any contrast that is high enough to channel light for a specific optical communication purpose is “high contrast”. Johnson meets this interpretation.

Still further, using Kyoto: col. 1, lines 23-25 and 50-54: a large index difference allows for easy propagation of light – substantially as disclosed in the present application. And that a difference of up to 4% is “usual” in certain applications. It would have been obvious to use as large a contrast as desired – depending upon the intended use of the final device.

### ***Response to Arguments***

Applicant's arguments filed 12 July 2005 have been fully considered but they are not persuasive.

As to the argument that one needs a teaching to put two optical waveguides side-by-side. Examiner is not going to allow any claim based on such a minor difference. This issue is ripe for appeal.

As to a per se rule, Examiner is not claiming duplication as a per se rule.

As to the many challenges (e.g. propagation loss), the claims do not require anything that overcomes the challenges. For example, claim 1 encompasses methods which result in waveguides with large propagation loss. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is argued that Dragone does not disclose single waveguides with multiple cores, rather it discloses a multiplex system. This argument is not understood – in that it is unclear how the claims define over the Dragone structure. Examiner cannot fathom how the present claims exclude the structure of Dragone.

As to the traversal of the taking of Official Notice: such fails to comply with the requirements for a proper traversal:

**From MPEP 2144.03**

If Applicant Challenges a Factual Assertion as Not Properly Officially Noticed or not Properly Based Upon Common Knowledge, the Examiner Must Support the Finding With Adequate Evidence

To adequately traverse such a finding, an applicant must specifically point out the

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supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. See 37 CFR 1.111(b). See also *Chevenard*, 139 F.2d at 713, 60 USPQ at 241 ("[I]n the absence of any demand by appellant for the examiner to produce authority for his statement, we will not consider this contention."). A general allegation that the claims define a patentable invention without any reference to the examiner's assertion of official notice would be inadequate. If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 ("[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2). If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

As indicated in the rejection above, the material of the Official Notice is now treated as being admitted prior art – no adequate traversal having been made. Applicant's traversal is directed to the modification based on the facts of the of the Official Notice, rather than a traversal of the facts of the Official Notice. The traversal is inadequate because it fails to address how/why/if/whether the claimed dopants are well known and routinely used in optical waveguides.

As to the arguments directed to the applicability of the known dopants, Applicants apparently require that those of ordinary skill need some sort of written motivation to use what is well known. Such is not required.

**From MPEP 2144.07**

Art Recognized Suitability for an Intended Purpose

The selection of a known material based on its suitability for its intended use supported a



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prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) (Claims to a printing ink comprising a solvent having the vapor pressure characteristics of butyl carbitol so that the ink would not dry at room temperature but would dry quickly upon heating were held invalid over a reference teaching a printing ink made with a different solvent that was nonvolatile at room temperature but highly volatile when heated in view of an article which taught the desired boiling point and vapor pressure characteristics of a solvent for printing inks and a catalog teaching the boiling point and vapor pressure characteristics of butyl carbitol. "Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig-saw puzzle." 325 U.S. at 335, 65 USPQ at 301.).

See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious); *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988) (Claimed agricultural bagging machine, which differed from a prior art machine only in that the brake means were hydraulically operated rather than mechanically operated, was held to be obvious over the prior art machine in view of references which disclosed hydraulic brakes for performing the same function, albeit in a different environment.).

As to the argument that the prior art PECVD processes cannot form the cores, but high density plasma (HDP) can: the argument is not well taken. PECVD is generally considered to be a HDP method – for example see Bazylenko's claim 5.

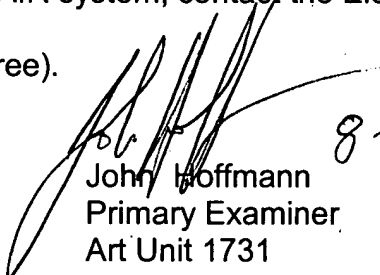
As to the assertions regarding reliability of making the high contrast cores - there appears to be no evidence to support this assertion. Moreover, reliability can be quite subjective – and the claims do not require any sort of success rate. And as indicated above, the term is not definite.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Hoffmann  
Primary Examiner  
Art Unit 1731

8-16-05

jmh